

National Health Information Infrastructure and Bioterrorism Preparedness

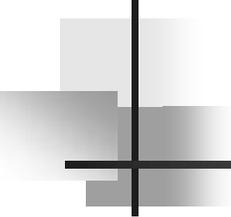


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Department of Health and Human Services

NHII National Conference

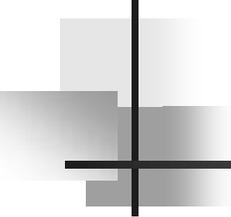
30 June 2003



THESIS

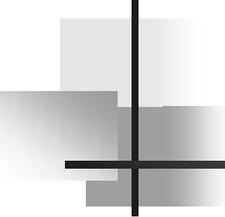
A National Health Information Infrastructure (NHII) will guarantee high level of preparedness for bioterrorism (BT).

Piecemeal applications of information technology (IT), while necessary for the short run, inherently can't measure up.



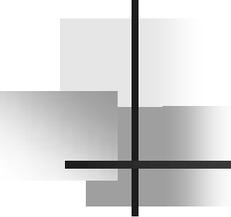
Relevant Features of NHII

- Ubiquitous Electronic Health Records (EHRs)
- Anytime/Anywhere Access to EHRs
- Medical Decision Aids Readily at Hand
- On-Line, Real-Time Link with Local Public Health Department (PHD)



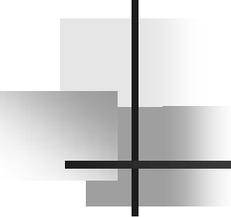
Core Capabilities for BT Response

- Early Detection of Possible BT Incident
- Prompt Investigation of Suspicious Outbreak of Infectious Disease
- Health Care Surge Capacity for Management of Mass Casualties



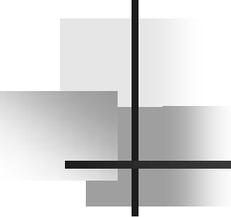
Clinician Readiness: Key to Early Detection

- Knowledgeable about BT Threats
- High Index of Suspicion When Presented with Unusual Symptoms or Disease Pattern
- Motivated to Report to Local PHD



The Suspicious Case (1)

- Review Patient's Medical History
- Seek Laboratory Test Results
- Consult with Colleagues Locally
- Consult with Colleagues at Other Facilities
- Compare with Contemporary Patients



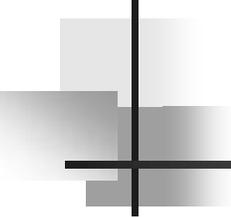
The Suspicious Case (2)

Without NHII:

- This full suite of tasks often is prohibitively labor-intensive.

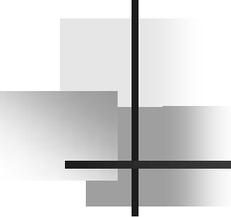
With NHII:

- Such analysis will be so much easier that it will become standard practice.



Keeping Current re BT (1)

- CME Courses
- Specialized Web Sites
- Professional Journals
- Traditional Library Resources



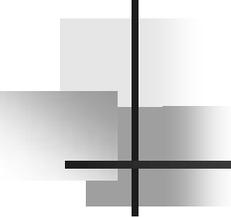
Keeping Current re BT (2)

Without NHII:

- Decision aids generally are separated spatially and temporally from the doctor/patient encounter.

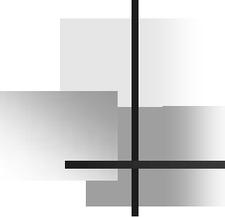
With NHII:

- Decision aids will be embedded in the IT infrastructure for patient care.



Interaction with Local PHD (1)

- Reporting Suspicious Cases
- Collaborating with the Ensuing Epidemiological Investigation



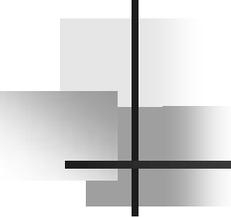
Interaction with Local PHD (2)

Without NHII:

- Reporting cases is a non-routine act often encumbered by poorly maintained lines of communication.

With NHII:

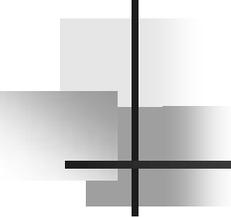
- Case reporting aids will be embedded in the IT infrastructure for patient care.



Syndromic Surveillance (1)

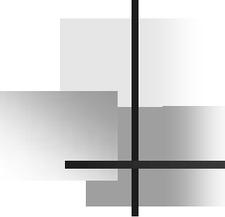
Continuous community-wide scanning of sentinel indicators of possible BT incident:

- unusual clusters of common symptoms
- atypical pattern of pharmacy sales
- spike in ambulance calls and ER visits



Syndromic Surveillance (2)

- Potentially invaluable complement to individual clinicians' detections and reports
- Could enhance epidemiological investigation of incident by enabling rapid identification of population at risk



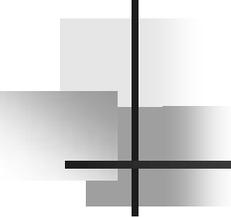
Syndromic Surveillance (3)

Without NHII:

- Most current efforts are limited severely by paucity of EHRs or lack of ready access to current EHRs

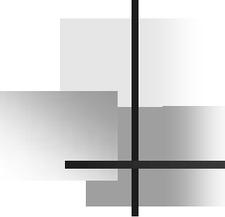
With NHII:

- EHRs will be accessible routinely over a geographic scope scalable to the region(s) affected by the incident.



Outbreak Investigation (1)

- Epidemiological (Epi) investigations necessarily are incident-specific
- Process generally begins with design of a customized data form



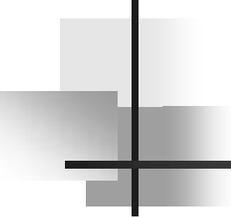
Outbreak Investigation (2)

Without NHII:

- Current suite of IT tools to facilitate design and use of Epi forms is very limited and doesn't provide routine linkage to EHRs

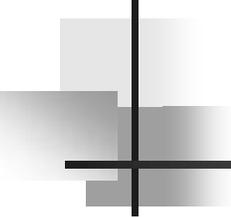
With NHII:

- Epi IT aids will feature built-in interoperability with EHRs.



Hospital Surge Capacity (1)

- Mass casualties are likely to overwhelm routine hospital operations.
- Much of mass casualty care will occur in non-routine settings.



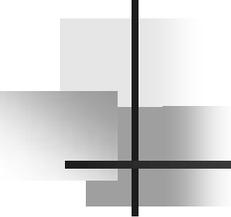
Hospital Surge Capacity (2)

Without NHII:

- The regular IT infrastructure for patient care generally will not suffice to support care given in non-routine settings.

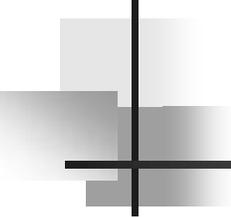
With NHII:

- The regular IT infrastructure will be adaptable and scalable to support care in non-routine settings.



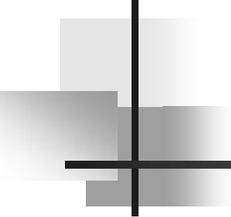
Critical Infrastructure Protection for the Healthcare Industry (1)

- National Security Directive 63
- Healthcare industry responding to “National Strategy to Secure Cyberspace”
- Draft “Call to Action” approved 3/2003



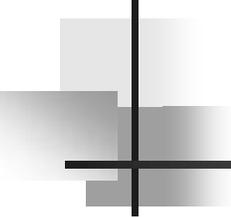
Critical Infrastructure Protection for the Healthcare Industry (2)

- Collaboration among private sector, DHS, and HHS
- Healthcare Advisory Council, made up of key industry leaders, launched 6/30
- Creation of the Healthcare Information Sharing and Analysis Center (HCISAC)



Healthcare Advisory Council

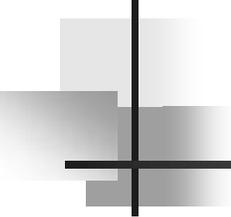
- Services to help protect the industry (i.e., alerts, best practices)
- Partnerships with federal government and cross-industries
- Advocacy for healthcare industry
- Communication and outreach to increase industry awareness
- Embracing principles of information sharing



How to Get Involved

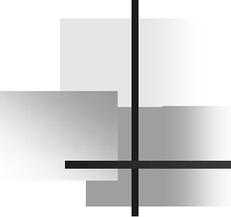
- Learn more
- Become a participant
- Reference the website:
<http://www.hcisac.org>

Thanks to Tim Zoph, CIO, Northwestern Memorial Hospital, for inspired and tireless leadership.



Technology Can Energize New Paradigms (1)

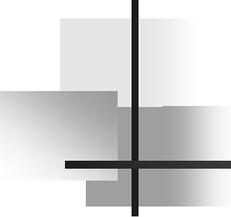
Some technologies don't just help;
they change the rules of the game –
or even the game itself.



Technology Can Energize New Paradigms (2)

Why didn't the Ancient Greeks invent chemistry?

Perhaps because they didn't have glass!



Technology Can Energize New Paradigms (3)

NHII could be the crucible from which emerges a safer homeland as well as better health care.